

CONFIDENTIAL

~~SECRET~~*Office Memorandum* • UNITED STATES GOVERNMENT

TO : Chief, External Projects Section

FROM : Chief, Research & Development Laboratory

SUBJECT: Feasibility Study - Ferrite Antenna for Use With URR-10,  
Status thereof

DATE: 19 July 1956

1. The purpose of this memorandum is to review the status of your request to examine the possibility of providing a loop-stick antenna for the URR-10. The Q of a coil wound on the ferrite rod supplied was checked at several frequencies in order to determine the feasibility of using a loop-stick antenna in the 3 - 30 mcs frequency range. These measurements showed that the Q of the coil was relatively high (210) at 790 kcs and very low (25) at 7.5 mcs. This fact indicates that the performance of the coil as an antenna at the higher frequencies would be very poor.

2. Considerable difficulty would be encountered in trying to adapt this type antenna to the URR-10. The input circuit would probably have to be completely redesigned from an unbalanced to a balanced input. Loop-stick antennas, when used at broadcast band frequencies, are designed, normally, to have the inductance of the antenna <sup>as part of the</sup> parallel-tuned LC circuit. This arrangement may also be necessary in the URR-10, thus increasing the complexity of a redesign.

3. The above information is based on a cursory examination of the problem; however, it is evident that considerable time and effort will be required to modify the URR-10 to use the loop-stick antenna. In addition, the "Q" measurements mentioned above open to question the feasibility of using the loop-stick at the higher URR-10 frequencies. For these reasons, the project has been suspended until more time and information become available.

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ENG-6-213

Director of Logistics

Director of Communications

Contract Negotiations with [REDACTED]

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1. The Office of Communications has an operational requirement for the development and fabrication of a series of very small ferrite antennas of a specialized design. In consideration of this requirement, an informal proposal has been received from [REDACTED] consisting of a two-phase project for the design and fabrication of ferrite antenna and detector units.

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2. In a memorandum dated 19 January 1956 from Chief, Engineering Division, OC, to Chief, Procurement Division, OL, it was requested that a task type contract be negotiated with [REDACTED] in order that we may establish development programs with this organization.

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3. We are forwarding herewith a Proposal for Ferrite Antenna Development, [REDACTED] Although this proposal expired on 6 March 1956, the contractor has indicated willingness to discuss an extension of time. It is requested that a task be negotiated under this contract in accordance with the attached proposal. Requisition No. MSB 56-319 in the amount of \$47,330.43 indicating the availability of funds under Allotment No. 6-7995-50 is attached.

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## Attachments

- (1) Letter and Proposal, [REDACTED]
- (2) Requisition No. MSB 56-319

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BBB  
OC-E/R&D-RP/WNH;mmh (12 March 1956)

Coordination:

cc: R&amp;D Subject File

OC-A [REDACTED]

MSB (2)

R&amp;D Vital File

Obligation File

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Dev-ep

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STANDARD FORM NO. 64

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# Office Memorandum • UNITED STATES GOVERNMENT

TO : Chief, Engineering Division/OC

DATE:

ATTN :

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FROM : Chief, Contract Administration Branch/PD/OL

SUBJECT: ( Contract No. RD-107, Task Order No. 3 with

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Forwarded herewith are ten copies of Monthly Letter  
Report submitted by under the  
subject task order. This report is for the period May  
15, to June 15, 1956.

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Attachment:  
Monthly Letter Report

Distribution:

- Orig & 1 - Addressee
- 1 - RD-107, T.O.#3 (Official)
- 1 - Chrono

OL/PD/AB (7-11-56)

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